SECTION 1
ADMINISTRATIVE INFORMATION

Submitted by

North Wind Construction Services, LLC
1425 Higham Street
Idaho Falls, ID 83402
208-557-7908
www.northwindgrp.com

8(a)
Small Disadvantaged Business
Alaska Native Corporation
DUNS 965491041

Point of Contact

Mr. Lee Rice
253-606-6309
lrice@northwindgrp.com

NORTHWIND
CONSTRUCTION SERVICES

RED HILL FUEL STORAGE FACILITY RESPONSE

Request For Information: SOL-R9-14-00001

Agency: U.S. Environmental Protection Agency
Office: Region IX

July 11, 2014

North Wind Construction Services, LLC thanks you for the opportunity to provide this capability statement in response to the U.S. Environmental Protection Agency Region IX's Request For Information (RFI) related to a response action at the U.S. Navy's Red Hill Fuel Storage Facility near Honolulu, HI.

1. COMPANY NAME, MAILING ADDRESS, AND POINT OF CONTACT

North Wind Construction Services, LLC
1425 Higham Street
Idaho Falls, ID 83402

Mr. Lee Rice
Telephone: 509-943-7900 *(office)* | 253-606-6309 *(mobile)*
Facsimile: 509-943-7901
E-mail: [HYPERLINK "mailto:lrice@northwindgrp.com"]

2. RECOMMENDED PERFORMANCE STRATEGY AND RELEVENT EXPERIENCE SUMMARY

North Wind and our teaming partner Global Bio Sciences LLC ("GBS") can provide the EPA immediate services to address the concerns of soil, groundwater and aquifer contamination caused by the release of fuels from the leaking tanks at the Red Hill Fuel Storage Facility. GBS is a Minority-Owned Small Business. GBS has dedicated over 15 years of extensive research and development of our exclusive Butane Bio-stimulation Technology, (BBT). GBS has effectively established a viable and cost effective solution for the most confounding environmental challenges. Effectively removing even the most recalcitrant contaminants, currently identified by the EPA, from contaminated groundwater and soils. BBT is the most effective enhanced bioremediation technology because it safely and dependably introduces a carbon source amendment that is more bioavailable to the crucial microbial populations than any other bio-amendment available, and can be delivered into even the most inaccessible and difficult pockets of contamination.

North Wind has conducted large scale soil and groundwater remediation projects for numerous Federal agencies across the country resulting from the release of volatile and petroleum contaminants. Some of these projects are described in Section 2 of this response.

3. BUSINESS TYPE

North Wind Construction Services (North Wind) is a Small Business Administration certified 8(a) firm that is wholly owned by its Alaska Native Corporation (ANC) parent company, Cook Inlet Region, Inc. (CIRI) and that meets the $33.5M size standard associated with NAICS Code 237120.

4. FACILITY SECURITY CLEARANCE OF OFFEROR

The Vice President and Secretary of North Wind Construction Services maintains a DOD Top Secret Clearance. If a Facility Security Clearance is required, North Wind Solutions, an 8(a) sister company to North Wind Construction Services, holds a FOCI Facility Security Clearance.

SECTION 2
Capability Statement

Submitted by

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About North Wind Construction Services

NORTHWIND CONSTRUCTION SERVICES North Wind Construction Services (North Wind) is a Small Business Administration certified 8(a) firm that is wholly owned by its Alaska Native Corporation (ANC) parent company, Cook Inlet Region, Inc. (CIRI) and that meets the $33.5M size standard associated with NAICS Code 237120.

North Wind is an award-winning, small business leader in the environmental management, engineering, and construction service industries. We possess wide-ranging capabilities that include innovative remediation technology development, testing, and implementation. North Wind is comprised of nearly 250 engineers, scientists, construction personnel, and other professionals who provide a broad range of services.

North Wind Core Capabilities

- Environmental Restoration
- Natural Resources/NEPA
- Environmental Compliance, Permitting, and Management
- Demolition and Deactivation
- Engineering
- Construction
- Remediation Technologies
- Health and Safety
- Waste Management
- Cultural Resource Services
- Public Involvement and Communications
- Information Technology and GIS

North Wind provides environmental, engineering, scientific, and regulatory support to numerous federal and state agencies including the U.S. Environmental Protection Agency (EPA), Department of Defense (DOD), Department of Energy (DOE), Department of the Interior (DOI), Department of Homeland Security (DHS), and the National Aeronautics and Space Administration (NASA), as well as numerous commercial customers. Our commitment to providing technical excellence and outstanding professional service in a timely and cost-efficient manner has resulted in the presentation of many awards and commendations. Recently, North Wind was named in *Engineering-News Record* as #163 of the Top 200 Environmental Firms in the nation. This distinction is a result of our successful history of performing over $600M in contracts for government and commercial agencies nationwide.

North Wind is uniquely positioned to assist the EPA with a wide scope environmental services because of our broad range of capabilities and experience. North Wind is a *full-service* environmental firm—we provide services from site investigations all the way through site closure—it's what we do on a daily basis for government and commercial entities nationwide and we excel at performing these services. Our firm has depth and breadth of experience in the services covered by the RFI and we thoroughly understand the importance of up-front investigation work as well as evaluating and selecting the most cost-effective cleanup remedy. We present a sampling of relevant projects we have successfully performed in Table 1 to demonstrate our broad range of capabilities and experience.

Table 1. North Wind Experience Relative to the PWS. *We have depth and breadth of environmental response experience as demonstrated by the sampling of 8 projects shown in Table 1..*

Project Title/ Location	Customer	Treatment and Remedial Processes and Systems	Monitoring and Evaluation	Media	Contamination Measurement	GIS and Modeling Support	Research Planning and Presentation	QA and QC Activities for Laboratory and Field Operations	Brief Summary of Work
Environmental Technical Support Services, Nationwide	EPA	●	●	●	●	●	●	●	Provided scientific and engineering technical support in hydrogeology, site assessment, groundwater remediation, and computer modeling of subsurface contaminant transport to EPA Remedial Project Managers at 17 CERCLA sites. Provided technical review of contractor work plans and technical reports for RI/FS, pilot tests of remedial technologies, and remedy performance assessments. Provided independent interpretation of characterization data for non-aqueous phase liquids (NAPLs), organic and inorganic contaminants, enhanced bioremediation, and natural attenuation. Performed computer modeling of subsurface transport.
Technical Support to EPA-4 for BF Goodrich and AIRCO CERCLA sites, Calvert City, KY	EPA / Battelle	●	●	●	●				Providing technical support to EPA project manager for a site with dense non-aqueous phase liquids (DNAPLs) and dissolved contaminants in vadose zone and groundwater. Provided technical review of contractor work plans and reports for focused RI activities at a landfill and burn pit with an operating remedy, where the presence of NAPL has caused the remedial timeframe to be longer than originally anticipated. Providing technical review of RI/FS activities at a large operational chemical manufacturing facility with a large pump and treat (P&T) system that recently transitioned from RCRA to CERCLA due to the presence of historical contamination and multiple potentially responsible parties (PRPs).
In Situ Bioremediation Pilot Test, IR Site 40, NAVPNSTA; Seal Beach, CA	NAVFAC		●	●	●		●	●	Provided technical expertise and specialized microbial testing to Bechtel Environmental, Inc. for an in situ bioremediation pilot test at IR Site 40, NAVWNSTA Seal Beach.

Project Title/ Location	Customer	Treatment and Remedial Processes and Systems	Monitoring and Evaluation	Media	Contamination Measurement	GIS and Modeling Support	Research Planning and Presentation	QA and QC Activities for Laboratory and Field Operations	Brief Summary of Work
ESTCP ER-0218 – In Situ Bioremediation of Chlorinated Solvents with Enhanced Mass Transfer at the Fort Lewis, Tacoma, WA	USACE	●	●	●	●	●	●	●	Led an Environmental Security Technology Certification Program (ESTCP) demonstration project to demonstrate enhanced mass transfer of chloroethenes from a DNAPL to groundwater during in situ bioremediation at the Fort Lewis East Gate Disposal Yard.
ESTCP ER-0708 – Enzyme Probe/Degradation Rate Field Evaluation for Monitored Natural Attenuation (MNA), Various Locations, USA	USACE		●	●	●	●	●	●	Led an ESTCP demonstration to evaluate the potential for aerobic biological attenuation of the contaminant TCE in groundwater and estimate the rates of aerobic TCE degradation.
ESTCP ER-0719 – Combining Low-Energy Electrical Resistance Heating with Biotic and Abiotic Reactions for Treatment of Chlorinated Solvent DNAPL Source Areas, USACE, Tacoma, WA	USACE	●	●	●	●		●	●	Led an ESTCP demonstration to evaluate the benefits of combining low energy electrical resistance heating with in situ bioremediation or with iron-based reduction using zero valent iron for the remediation of dense non-aqueous phase liquid source zones at the Fort Lewis East Gate Disposal Yard.
ESTCP ER-0318 – Applying Diagnostic Tools for Performance Evaluation of In Situ Bioremediation of a Chlorinated Solvent Source Area at the Fort Lewis East Gate Disposal Yard. USACE, Tacoma, WA	USACE		●	●	●		●	●	Led an ESTCP demonstration to evaluate the efficacy and cost-effectiveness of innovative diagnostic tools to implement in situ bioremediation at a chlorinated solvent DNAPL site, including multi-level sampling wells, flux meter technology, stable carbon isotope ratios and molecular microbial tools.
Evaluation of Bioremediation with Electrical Resistance Heating for a TCE Plume, Pemaco Superfund Site, Maywood, CA	TN&A [EPA]		●	●	●		●	●	Conducted laboratory tests and provided technical design, evaluation and recommendations for field pilot tests to evaluate enhanced in situ bioremediation in conjunction with electrical resistance heating for a TCE source area.

North Wind and our teaming partner Global Bio Sciences LLC ("GBS") can provide the EPA immediate services to address the concerns of soil, ground water and aquifer contamination caused by the release of fuels from the leaking tanks at Red Hill. GBS is a Minority-Owned Small Business. GBS has dedicated over 15 years of extensive research and development of our exclusive Butane Bio-stimulation Technology, (BBT). GBS has effectively established a viable and cost effective solution for the most confounding environmental challenges. Effectively removing even the most recalcitrant contaminants, currently identified by the U.S. Environmental Protection Agency (EPA), from contaminated ground water and soils. BBT is the most effective enhanced bioremediation technology because it safely and dependably introduces a carbon source amendment that is more bioavailable to the crucial microbial populations than any other bio-amendment available, and can be delivered into even the most inaccessible and difficult pockets of contamination. Some of the many advantages of BBT are:

1. BBT is a green technology that is clean, highly effective, fast acting, and cost-effective.
2. BBT's breakthrough in *in situ* bioremediation properties will change the way sites are cleaned up.
3. BBT represents innovative remedial technology at its best, bringing much needed progress to the environmental market.

Countries worldwide are faced with the complex task of protecting human health and the environment from man-made, chemical compounds that continue to pollute our soil and groundwater decades after being spilled, or released into the environment.

Our Technologies has been fully proven, field tested, and verified to effectively treat the two classes of hazardous chemicals, which are responsible for the most widespread and hazardous environmental impacts by industry: petroleum hydrocarbons and chlorinated solvents at sites throughout the Unites States, including the General Motors Plant in Sioux City Iowa. After application of the BBT process at the GM plant, the United States Environmental Protection Agency (USEPA) made the following recommendation: *"The butane bio-stimulation alternatives are preferred because they are expected to be the most cost effective at reducing toxicity, mobility, and volume through treatment; to provide more effective short-term groundwater cleanup; to be the least expensive of the active alternates."*

Technical Background

Our patented process involves the injection of air and butane, using diluted and safe concentrations, into contaminated soils and groundwater aquifers where the butane serves as a highly bioavailable electron donor that stimulates microbiological metabolic processes causing pollutant chemicals to break down and naturally attenuate at a exponentially accelerated pace, of which effective remediation results taking many years now can be reduced in months. Our technologies is applied using a unique, systematic procedures that has been carefully developed over 15 years of research and applications. The process is carefully planned, monitored and documented in these steps:

- Preliminary Study,
- Mobilization of injection equipment at one or more injection well, and monitoring equipment at a selected performance monitoring wells,
- Injection of air and butane using the GBS's patented process, and
- Monitoring of the ongoing treatment process, including but not limited to laboratory testing and replacement of specific materials.

Our North Wind/ GBS team then submits detailed reports concurrently with the treatment process with detailed documentation of the cleanup process, making certain that it complies with USEPA and

applicable state environmental regulations. All monitoring and reporting will thereby meet and/or exceed industry and regulatory agency standards.

The Preliminary Study will identify the following:

1. The horizontal and vertical extent of the treatment zone;
2. Treatment characteristics of the target contaminants;
3. Hydro-geologic and geochemical parameters that will affect the treatment process;
4. Identify the presence or absence of special conditions that could positively or negatively affect the remediation process.

The Process

1. Mobilization of injection equipment and staff of technical experts. The equipment footprint is limited to a small area next to each injection well for staging air and butane tanks, pumps and control panel.
2. Execution;
   a. Construction of injection and monitoring wells, if necessary. If possible, existing monitoring wells will be used for both injection and monitoring, and
   b. Selecting BBT injection points using optimal locations in accordance with a carefully designed protocol, accompanied by monitoring and testing.
3. Confirmation that BBT system objectives have been met, followed by demobilization (if needed).

Benefits

The process is designed to meet and/or exceed relevant USEPA or other state or international regulatory standards. The technology can be implemented at typical environmental remediation sites at a fraction of the cost of alternative remediation approaches. Compared with competing bioremediation technologies BBT achieves remediation goals with higher certainty and lower overall project cost because of its better delivery and bioavailability properties. At the *General Motors (Super Fund) site in Sioux City Iowa, the U.S. EPA has independently identified that the cost of this process is significantly less when compared to the three (3) other competing technologies as follows:

1. Option 1 : Groundwater - No action
2. Option 2 : Groundwater – Extraction & Treatment: $2,100,000
3. Option 3 : Groundwater – Butane Bio-stimulation: **$800,000**
4. Option 4 : Soil – No action
5. Option 5 : Soil – Soil Vapor Extraction: $315,000
6. Option 6 – Soil – Butane Bio-stimulation: **$77,000**

**These are actual $ figures given, at that time of treatment, and reported to the EPA*

Table 1. Advantages of the GBS System Compared to Other Remediation Treatment Systems

GBS System	Competing Systems
▪ Lower capital costs	▪ Higher capital costs
▪ Lower set up and operating costs	▪ Higher set up and operating costs
▪ Simplicity of operation, natural, in-situ, bio-remediation	▪ Complicated systems requiring sophisticated infrastructures and costly power or labor requirements
▪ Relies on non-toxic natural elements	▪ Relies on largely ineffective and sometimes adverse materials which take long, creating sometimes adverse side effects
▪ Capable of re-mediating many different waste streams	▪ Most systems are limited to a specific waste stream
▪ No dumping or storage of resulting remediation materials, resulting in lower costs and labor.	▪ Sludge and liquid waste are usually dumped in very expensive hazardous waste landfills or the costs of rendering toxic materials inert are very cost-prohibitive
▪ Can provide quick and full turn-key mechanical set up	▪ Either expensive to implement or requiring multiple repeated applications
▪ Provide worker training	▪ Provide worker training
▪ Environmentally safe with no side effects	▪ Non-bioremediation technologies are typically not environmentally friendly or safe and many other bio-amendments have undesirable side effects on groundwater
▪ Can be implemented in-situ without removal of soils or removal of groundwater, lower costs.	▪ Ex situ remedial technologies require removal of soils or groundwater. Other non-bio-remediating in-situ technologies are chemically or physically disruptive.
▪ Converts contaminants into inert, non-toxic and environmentally safe CO2 and H2O	▪ Ex situ technologies do not convert waste to anything useful and require disposal or physical treatment and removal.
▪ Allows accumulation of Carbon Credits due to reduced power and logistical requirements.	▪ May not allow for carbon credits and increases GHG emission from fossil fuel power usage.

Case Studies

In addition to the case cited above, Sioux City Iowa, GM Plant, additional case studies can be provided upon request.

WHAT NORTH WIND AND GBS CAN DO AT RED HILL

The North Wind / GBS team, can quickly implement this technology to the Red Hill Storage Facility to quickly and efficiently address the concerns with groundwater contamination by:

1. Design all preventative modeling and underground systems to effectively remediate existing contaminated groundwater wells, in the immediate location of the USTs at the Red Hill Facility.
2. Design and immediately remediate the existing toxic chemicals which are currently found in the groundwater of RH-MW-02 and substantially lower all those chemicals within a relatively quick time period. The effectiveness of our process in fractured rock will be highly effective because of the quick access that butane can travel and have optimum effectiveness. To our knowledge, no other remediation technologies and/or abatement process has been used to date, in that specific area and addressing the specific fuel related contaminants found, ever since finding these high levels of fuel related chemical contaminates since last officially reported on 01/20/06. (Report and study prepared by TEC for NAVFAC 01/2008 – Indefinite Delivery/ Indefinite Quantity Contract / Contract Number N62742-02-D-1802, CTO 007 [pages: 111, 122, 141])
3. Establish semi-permanent and permanent infrastructure "grids" around the close proximity (preventive barriers) and within the existing aquifers to remediate contaminated chemicals when present, to enable the drinking water standards, (as regulated by the EPA) to treat and meet, or exceed the required minimum allowable EPA (DOH) levels.
4. Assist the EPA and NAVFAC in their efforts, to provide updated and effective technologies which can monitor and accurately measure any volumes of fuel releases and also to recover the fuels that have leaked to prevent any contaminants from entering the groundwater in the future.
5. Assist the EPA and NAVFAC in their efforts to find superior and updated materials to repair the existing USTs and contain the fuels, thereby preventing any future fuel releases.

SUMMARY

The world is now demanding proven environmentally safe and commercially viable methods for the effective remediation and treatment of hazardous and toxic waste contaminants, which have polluted and are continuing to pollute (contaminate) our precious groundwater supplies and soils, thereby negatively affecting the quality of life, health and welfare of community and environment as a whole.

North Wind / GBS, with its effective process and field experience stands at the forefront of these very difficult environmental issues. Being a key "solution provider" for "difficult to treat" toxic and contaminated materials and also providing the most cost effective results for ongoing development of environmentally friendly technologies for complex soil and groundwater problems, which has perplexed the entire industry for decades and effectively addressing need of cleaning our environment. Comparing the actual results over time, measured results and costs, is what set's the North Wind/GBS team apart from the rest of the pack.

Our system(s) process is a proven environmentally-safe, economically viable technology, which operates through various stages of physical transformation coupled with the use of our patented technologies, biochemical and microbial reactions and mechanisms. This process is designed to neutralize, break apart, rearrange and restructure complex toxic contaminated materials, and rendering it inert, leaving no side effects or adverse environmental conditions and thereby achieve optimum results, which meet, or exceed all EPA closure levels and with very low O&M requirements. Most importantly however, is that BBT has

a proven track record of performance that is proven to be "unmatched" within the industry and in conjunction with the USGBC LEED "Triple Bottom Line" Criteria

Why Select North Wind?

- North Wind Construction Services is part of a family of companies that is managed by the North Wind Group and is a fully owned subsidiary of its ANC parent firm, CIRI.
- North Wind is a financially secure 8(a) prime contractor with $100M in bonding available and a $4.8M line of credit.
- North Wind has a mature health and safety program that is understood and supported by the entire North Wind staff. Our outstanding safety record is demonstrated by over 16 years of safe operation and a low Experience Modification Rate (EMR) of 0.78.
- With a fully operational, in-house construction division with design-build qualifications and experience, North Wind brings the EPA a seasoned small environmental investigation and restoration firm supported by corporate-owned heavy equipment, operators, and construction managers capable of providing full-service, turn-key environmental response services.
- North Wind's ANC 8(a) status allows us to enter into sole source negotiations with our clients.

Benefits to Sole Source Contracting to ANC 8(a) Firms

- **Schedule** – A sole source award substantially shortens an otherwise lengthy competitive procurement schedule and minimizes the need for procurement resources.
- **No Competitive Threshold Limit** – ANC 8(a) concerns are exempt from the competitive threshold limit of $4M [*13 CFR 124.506(b)(1)*].
- **No Upper Threshold on Awards** – ANC 8(a) concerns can be awarded a sole source contract with no dollar size limitation [*13 CFR 124.506(b)*]; however, awards larger than $20M require Justification & Approval (J&A) [*NDAA FY 2010 Sec. 811; 48 CFR 6.303*].
- **No Protests on Eligibility or Size** – Sole source awards to 8(a) concerns are not subject to protest [*13 CFR 124.517*].
- **Cost Effective** – A sole source award affords the EPA the opportunity to conduct open book negotiations directly with North Wind.